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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,893	09/14/2006	Kengo Onaka	36856.1463	1786

54066 7590 02/27/2008  
MURATA MANUFACTURING COMPANY, LTD.  
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EXAMINER
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DINH, TRINH VO

ART UNIT	PAPER NUMBER
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2821

NOTIFICATION DATE	DELIVERY MODE
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02/27/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JKEATING@KBIPLAW.COM  
uspto@kbiplaw.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,893	<b>Applicant(s)</b> ONAKA ET AL.	
	<b>Examiner</b> Trinh Vo Dinh	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/30/2008</u>  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

This is a response to a RCE filed 01/30/2008. Claims 13-27 are pending.

#### *Claim Objections*

1. Claim 22 is objected to because of the following informalities:

In claim 22, lines 4-5, “a first dielectric base member” and “a second dielectric base member” should be changed to “the first dielectric base member” and “the second dielectric base member” respectively because the elements have been recited in line 2 of the claim.

Appropriate correction is required.

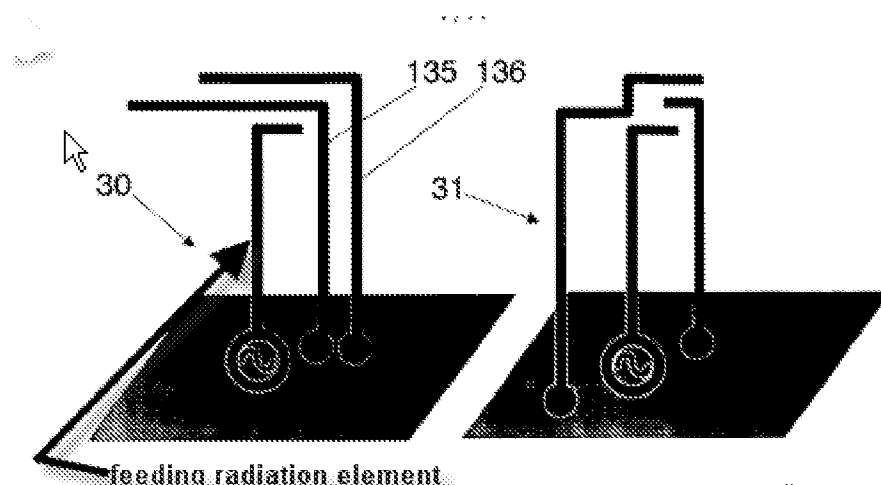
#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 13-16, 19-20 and 27 are rejected under 35 U.S.C. 102(a) as being anticipated by PUENTE LALIARDA (WO 2004/025778 A1 of record).



Respecting claim 13, PUENTE discloses, in Fig. 7, an antenna (30) comprising a substrate (p. 14, lines 3-4) having a ground electrode, a feeding radiation element (in an above Figure) including feeding means and including a radiation electrode outside a dielectric, and a first non-feeding radiation element (136) including a radiation electrode outside a dielectric substance, a second non-feeding radiation element (135) including a radiation electrode outside a dielectric substance wherein the first non-feeding radiation element (136) and the second non-feeding radiation element (135) are electrically connected to the ground electrode (p. 13, line 9), wherein the feeding radiation element is disposed on the ground electrode such that a surface of the radiation electrode of the feeding radiation element is substantially parallel to a face of the ground electrode and such that the feeding radiation element is disposed in the vicinity of a predetermined side of four peripheral sides of the ground electrode (i.e. at the left-hand side antenna 30). PUENTE further discloses the first nonfeeding radiation element (136) is disposed on the ground electrode such that a face of the radiation electrode (i.e. a horizontal part of electrode 136 being connected the vertical part) is substantially parallel to the face of the ground electrode and such that the first non-feeding radiation element (136) is disposed in the vicinity of the predetermined side wherein the second nonfeeding radiation element (135) is disposed such that the second nonfeeding radiation element (135) is adjacent to both the feeding radiation element and the first non-feeding radiation element (136) and such that at least part of the second nonfeeding radiation element (135) projects outside the ground electrode from the predetermined side (i.e. one end of the element 135 projects partly outside the left hand side of the ground electrode of antenna 30, as depicted in Fig. 7).

Respecting claims 14-16 and 19, PUENTE further discloses the dielectric substance being defined by a single base member (Fig. 7), or being defined by at least two separate dielectric base members (Fig. 14), the second non-feeding radiation element (135) is electrically connected at a substantially central location of the desired side, of the ground electrode, and the ground electrode is defined by a conductor pattern that is provided on the substrate and that has a substantially rectangular shape (Fig. 7) when viewed in plan.

Respecting claims 20 and 27, PUENTE discloses, in Fig. 7) the dielectric substance (p. 14, lines 3-4) being defined by a dielectric base member, and the radiation electrode of each of the feeding radiation element, the first non-feeding radiation element (136), and the second non-feeding radiation element (135) is provided on the dielectric base member. Furthermore, PUENTE discloses a portable radio communication apparatus comprising the antenna (page 8, lines 17-19).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-18, 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over PUENTE.

Respecting claims 17-18, PUENTE discloses every feature of the claimed invention as discussed above in claim 13. However, PUENTE fairly suggest a triple resonance. PUENTE further discloses, in Fig. 12, a planar shape and an overall size of the radiation elements (147, 148) are different. It is obvious to accordingly adapt the antenna of PUENTE to comprise radiation electrodes having a different planar shape and overall size, so that the resonance frequency bands of the radiating elements are different for providing a triple resonance antenna. Such modification is merely well known in the art to provide the antenna with ability of operating at multiple frequencies.

Respecting claim 21, PUENTE discloses every feature of the claimed invention except insert molding and thermoplastic. However, forming radiation elements by insert or outsert molding using a thermoplastic resin as the dielectric base member, are commonly known fabrication details. Therefore molding radiation elements and using a thermoplastic as the dielectric base would have been deemed obvious to one skill in the art.

Respecting claim 26, PUENTE discloses every feature of the claimed invention except a chip capacitor or inductor. However, installing a chip capacitor or inductor in an electrical connection path between the radiation electrodes and the ground electrode is a matter of usual design. Therefore, to provide PUENTE' antenna with a chip capacitor or an inductor would have been deemed obvious to one skill in the art for matching desired antenna resonance frequencies.

***Allowable Subject Matter***

6. Claims 22-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

The cited art of record fail to teach the dielectric substance is defined by at least a first dielectric base member and a second dielectric base member, and the radiation electrode of each of the feeding radiation element and the first non-feeding radiation element is provided on the first dielectric base member, and the radiation electrode of the second non-feeding radiation element is provided on the second dielectric base member that is different from the first dielectric base member on which the radiation electrode of each of the feeding radiation element and the first non- feeding radiation element is provided.

***Inquiry***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh Vo Dinh whose telephone number is (571) 272-1821. The examiner can normally be reached on Monday to Friday from 9:30AM to 6:00PM. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens, can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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*February 12, 2008*

/Trinh Vo Dinh/

Primary Examiner, Art Unit 2821